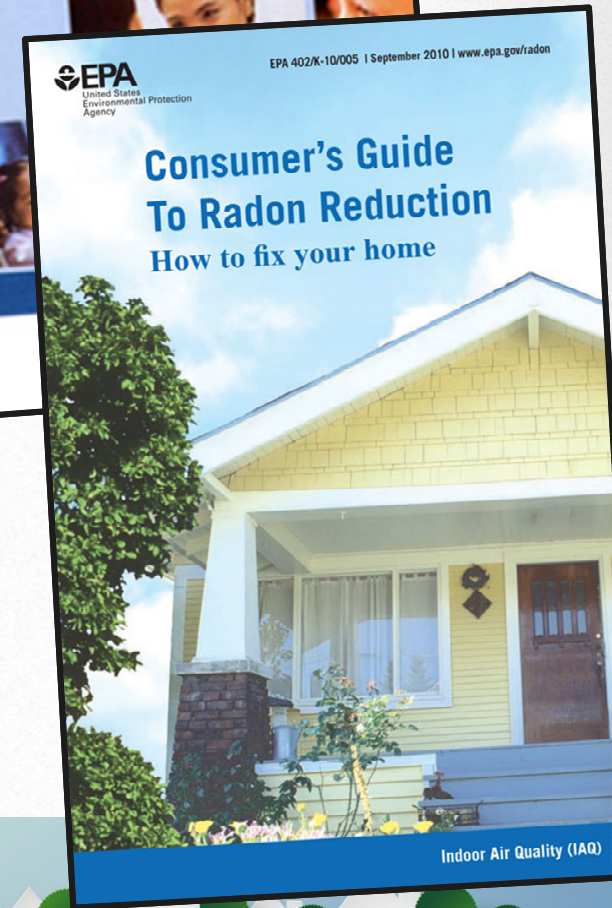
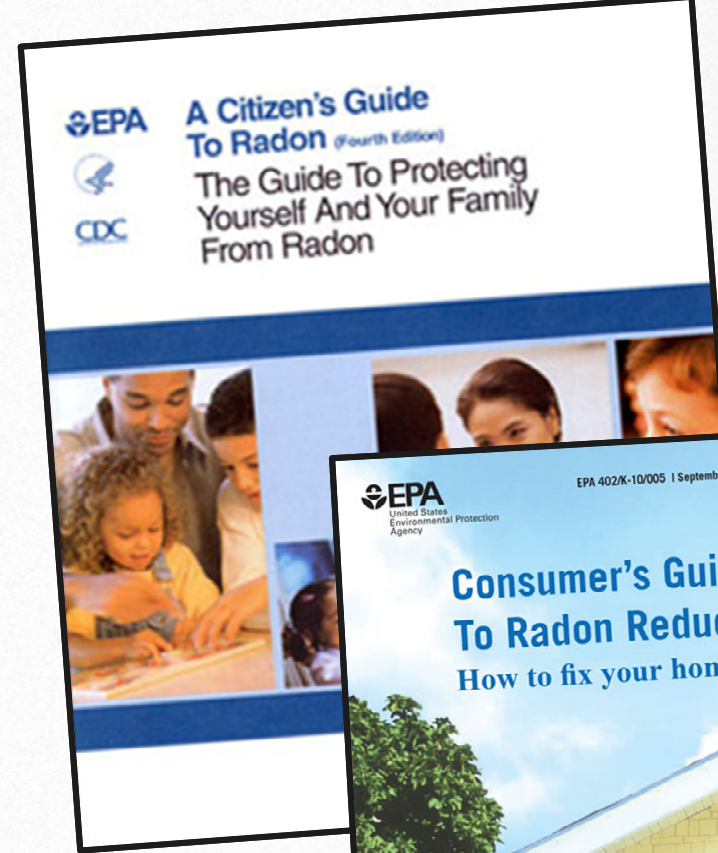


RADON

Fixes for Existing Housing:

- ✓ Seal floor and cracks
- ✓ Vent from below slab
- ✓ Fan sucks air – active system
- ✓ Sump suction reduces entry



FINDING A QUALIFIED RADON CONTRACTOR

- Contact EPA

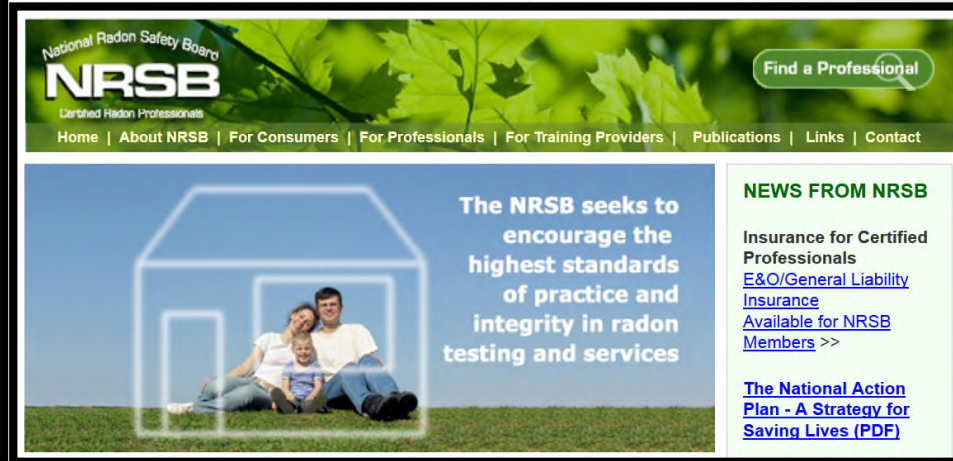
<https://www.epa.gov/radon/find-information-about-local-radon-zones-and-state-contact-information#radonmap>

- Contact a private national proficiency programs



The screenshot shows the AARST-NRPP website. The header features the AARST-NRPP logo and the tagline "Radon Professionals Saving Lives". A navigation bar includes links for Home, Membership, Certification, Symposium, Standards & Policy, Store, and Contact Us. A search bar is located in the top right. The main content area is divided into two columns. The left column features a photo of a man in a yellow hard hat working on a laptop, with text describing the organization's commitment to ANSI standards and radon risk reduction. The right column is titled "FIND A RADON SERVICE PROVIDER" and includes a magnifying glass icon, links to "Find a Radon Service Provider", "Find an AARST Member/Company", and "Find a Certified Laboratory", and a note that AARST-NRPP professionals can be both Association members and Certified Professionals.

<http://aarst-nrpp.com/wp/>



The screenshot shows the NRSB website. The header features the NRSB logo and the tagline "National Radon Safety Board". A navigation bar includes links for Home, About NRSB, For Consumers, For Professionals, For Training Providers, Publications, Links, and Contact. A search bar is located in the top right. The main content area is divided into two columns. The left column features a photo of a family sitting on a lawn in front of a house, with text stating "The NRSB seeks to encourage the highest standards of practice and integrity in radon testing and services". The right column is titled "NEWS FROM NRSB" and includes links for "Insurance for Certified Professionals", "E&O/General Liability Insurance Available for NRSB Members >>", and "The National Action Plan - A Strategy for Saving Lives (PDF)".

<http://www.nrsb.org/>



VOLATILE ORGANIC COMPOUNDS

Educate for these simple steps:

1. Don't use it if you don't have to.
2. Substitute a better product.
3. Store materials properly.
4. Ventilate.

Toxic Free Tips
for your home, school, work place, and community

Recipes For Safer Household Cleaners

Multi-purpose → Tub & Sink → Window & Mirror → Toilet Bowl → Drain → Oven → Bathroom Mold Remover

Multi-purpose *greener* Cleaner
(A multi-purpose cleaner that cleans and disinfects)

- 1 tablespoon soap (flakes, powder, or liquid) – not detergent
- ½ cup of white distilled vinegar
- 12 ounces (1 ½ cups) water

Add the ingredients to a clean 16-ounce spray bottle. Put the cap on and shake well.

Tub & Sink *greener* Cleaner

- Baking soda
- Liquid soap (not detergent). Castile or Murphy's Oil Soap are good options.

Use baking soda in place of scouring powder. Sprinkle it liberally on porcelain fixtures and rub with a wet rag. Add a little soap to the rag for more cleaning power. Rinse well to avoid leaving a hazy film. (Baking soda won't scratch the porcelain.)

Window & Mirror *greener* Cleaner

- ¼ cup white distilled vinegar
- 16 ounces of water

Pour ingredients into a clean spray bottle. Spray on surface. Rub with a lint-free rag, such as a diaper or sheets of newspaper.

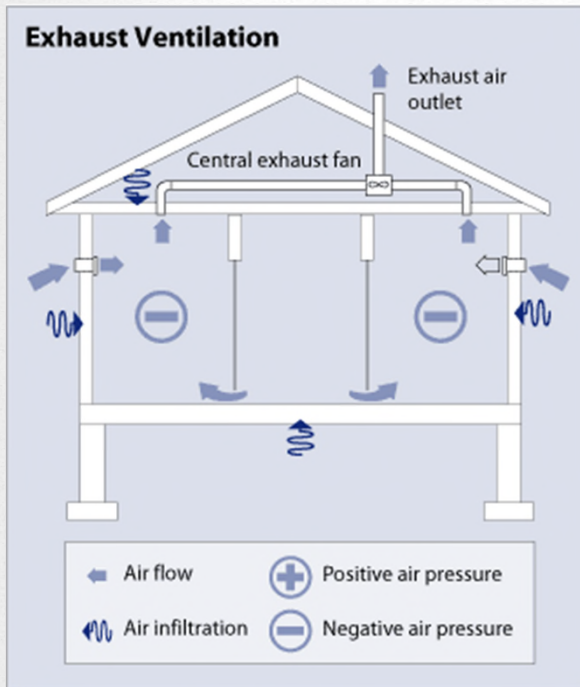
Cost per ounce:
This recipe: \$.01
Commercial: \$.12

Cost per ounce:
This recipe: \$.08
Commercial: \$.12

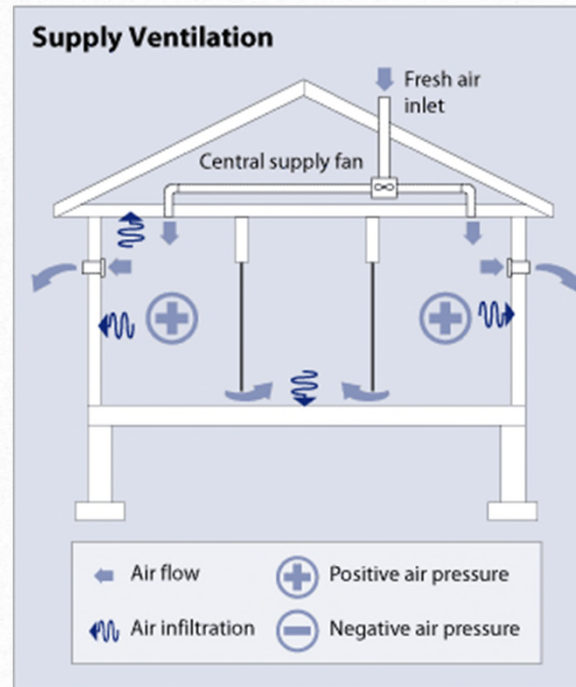
www.ecy.wa.gov/toxicfreetips



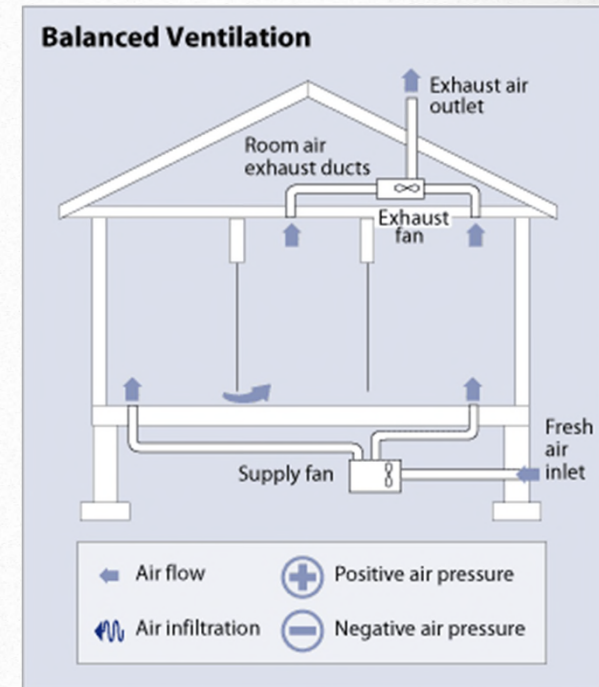
KEEP IT VENTILATION - STRATEGIES



Exhaust Only



Supply Only



Balanced
Exhaust and Supply



KEEP IT MAINTAINED INTERVENTIONS

- General maintenance is essential
- Addressing lead-based paint is critical.



EPA RENOVATION REPAIR AND PAINTING RULE (RRP)

Firms performing renovation, repair or painting projects that disturb lead-based paint in homes, child care facilities and pre-schools built before 1978 must:

1. Have their firm certified by EPA (or an EPA authorized state),
2. Use certified renovators who are trained by EPA-approved training providers and
3. Follow lead-safe work practices.

Essentials
Manual



FIRM CERTIFICATION

Firms that require certification:

- Anyone paid to perform work that disturbs paint in housing and child-occupied facilities built before 1978 must be certified.
- Examples:
 - Residential rental property owners / managers
 - General contractors
 - Special trade contractors



LEAD-SAFE WORK PRACTICES

BEFORE renovation, firms must distribute EPA's Renovate Right booklet

DURING renovation

Examples of requirements:

- Work area must be contained to prevent dust and debris from leaving the work area
- There must be a thorough clean up followed by a procedure to verify that the work area is free of lead contamination.



WHAT IS YOUR RESPONSIBILITY AS AN HHE?

- Know if a house was built before 1978,
- Identify whether the property has deteriorated paint,
- Educate the resident about the RRP requirements



KEEP IT PEST-FREE INTERVENTIONS

Integrated Pest Management (IPM)

- The best approach to managing pests
- HUD, CDC, EPA, the National Pest Management Association all consider it the best practice in managing pests
- Not new, unproven or radical
- HUD has implemented IPM since 1995



WHAT IS IPM?

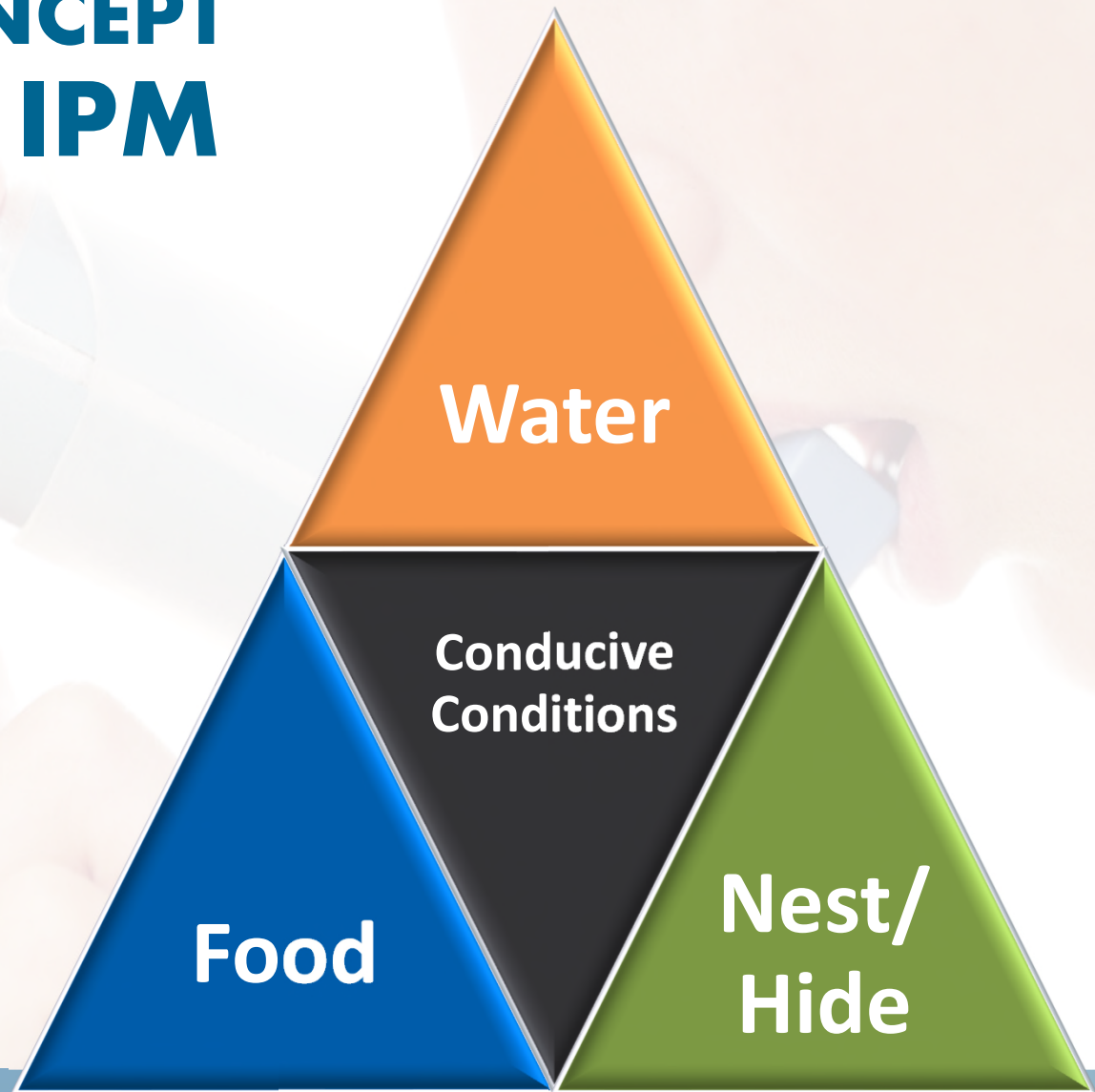
Integrated – IPM uses multiple methods that work together, and have the least risk to people and the environment.

Pest – IPM is used for many pests. We'll cover cockroaches, mice, rats and bedbugs.

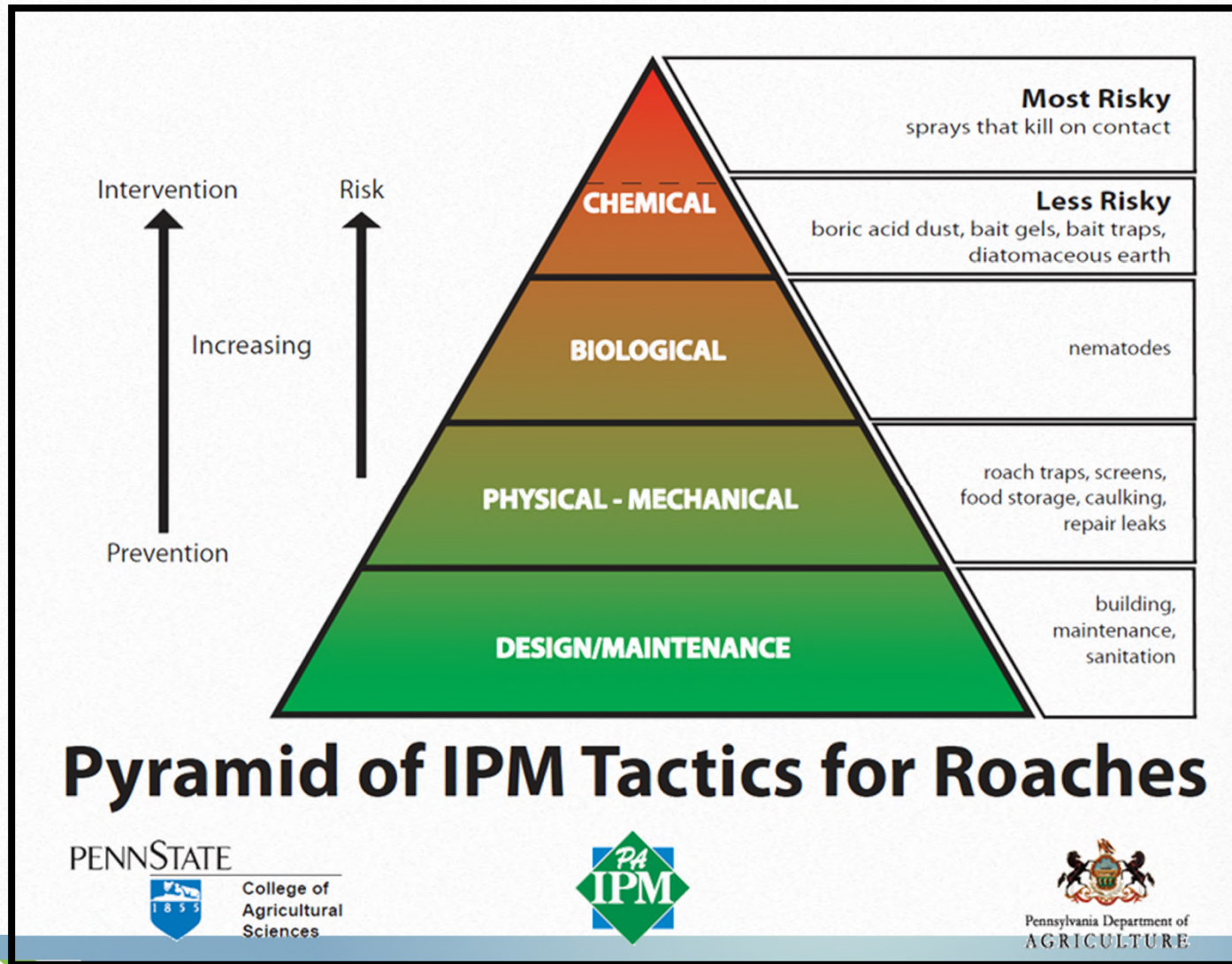
Management – you can't get rid of pests forever but you can successfully manage them.



THE CONCEPT BEHIND IPM



EXAMPLE: HANDLING ROACHES THE IPM WAY



WHAT IS IPM?

The IPM approach includes multiple, integrated tools:

Educational tools – educating residents to change behaviors so no available food, water or hiding places for pests in their house.



Physical tools – preventing pests from getting into a house (e.g. sealing up cracks in a foundation and / or using snap traps)



Chemical tools – using low-toxicity pesticides with limited exposure to people when using (e.g. cockroach bait stations)



THE SIX STEPS OF IPM

Steps	Description
1. Inspection and Identification	Inspect the property and identify the pests.
2. Exclusion	Keep the pests out of the house.
3. Educate residents	Help residents understand their important role in managing pests.



THE SIX STEPS OF IPM

Steps	Description
4. Sanitation	Make sure food, water and hiding places are not available to pests.
5. Physical and Chemical Control	Use glue traps (cockroaches), snap traps (mice), and rat traps. Use bait stations for cockroaches and insecticide dusts.
6. Monitoring	Use glue traps and snap traps to control pests and monitor property to make sure they haven't returned.



PRIMARY BENEFITS OF IPM

It's Safer

By their very nature, pesticides are toxic. IPM minimizes the use of pesticides so people, animals and the environment are much less likely to be harmed.

It Works

For insects, conventional pest control primarily utilizes spraying, and sometimes fogging. The problem with these methods is that they only kill the insects they touch. What about those that are hidden?



1. INSPECTION & IDENTIFICATION

- Thorough inspection
- Identification of pests found



IDENTIFICATION RESOURCES

- National Pest Management Association's (NPMA) Field Guide app for identifying pests. Go to Apple Store or Google Play Store to download (costs \$4.99).
- For cockroach identification, go to <https://ecommons.cornell.edu/handle/1813/43848>, click on "found-cockroach-bro-NYSIPM.pdf" under VIEW/OPEN.
- The University of Minnesota Cooperative Extension at: <http://www.extension.umn.edu/garden/insects/find/insects-by-category/#household>.
- The University of Kansas at: <http://entomology.k-state.edu/extension/insect-information/household-pests.html>



WHAT TO LOOK FOR AND WHERE TO LOOK

What to look for:

- The pest (*dead or alive*)
- Pest body parts (*yes, eww*)
- Droppings (*also eww*)
- Nests and burrows

Where to look:

- Near food and water sources
- Hidden places (e.g. behind an appliance)
- Near entry holes





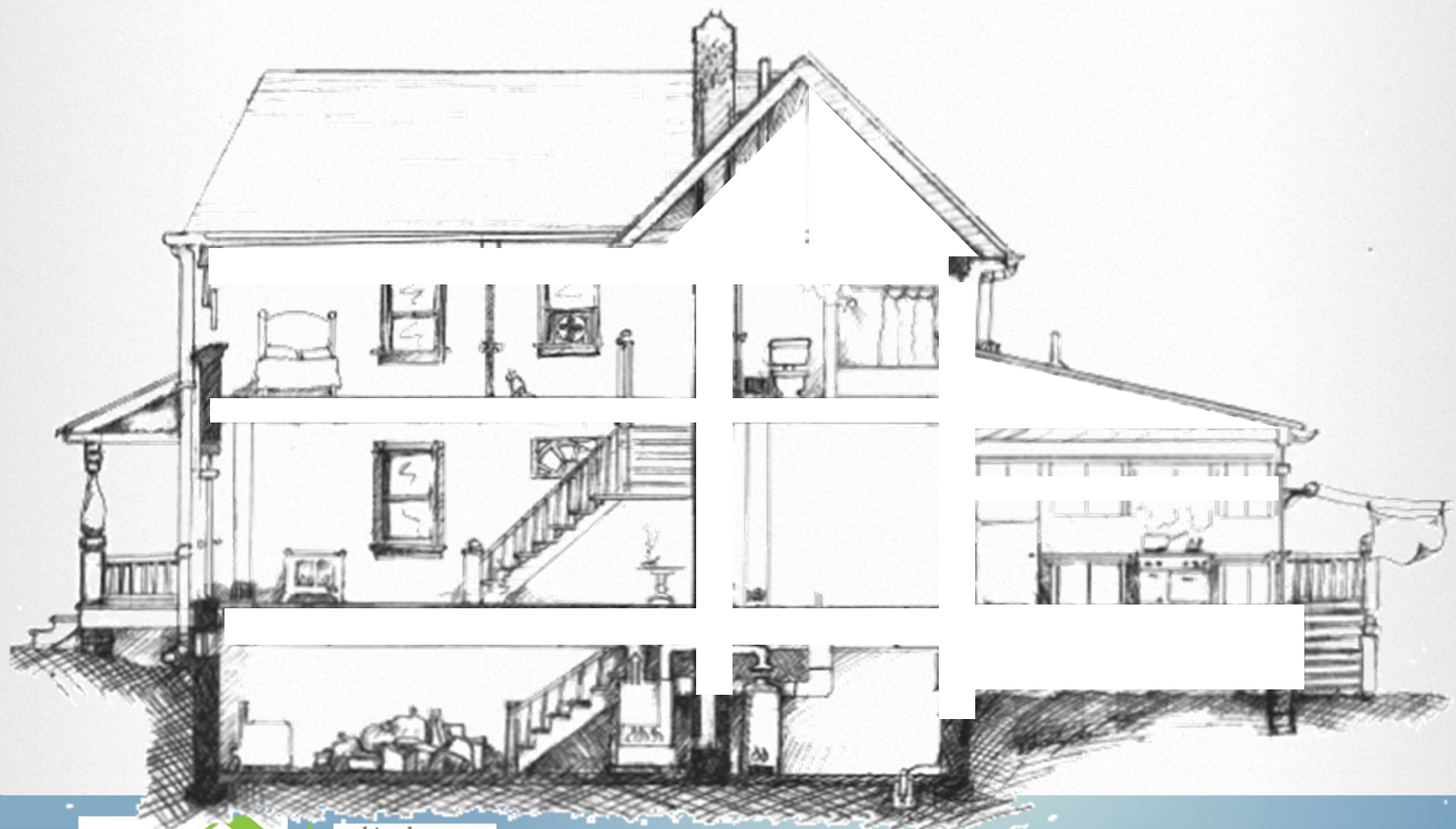
*Rat proofing
did not work
here...*

*Get down on the ground and
look under the pipe...*

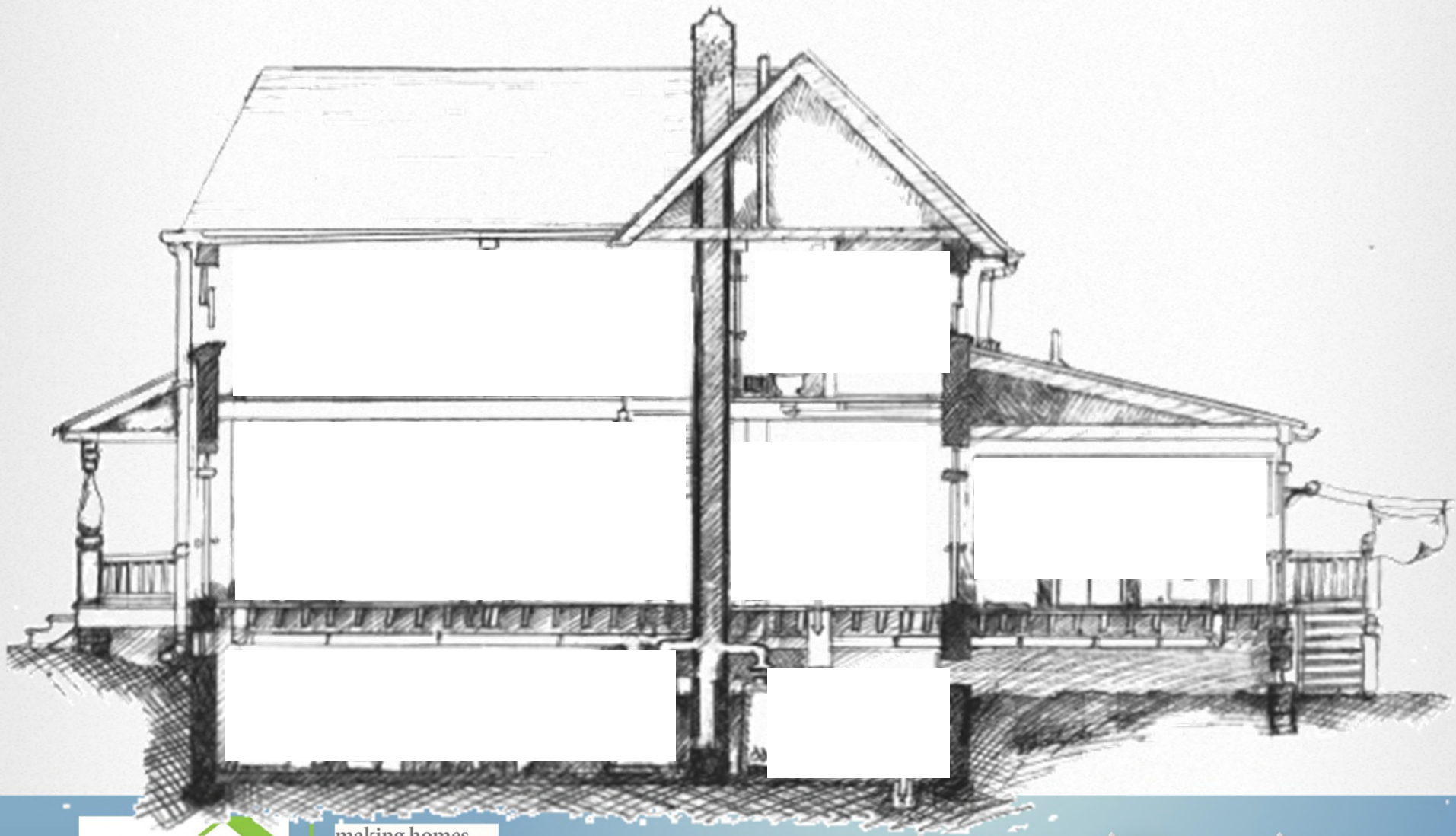
Rat burrow entrance



A PERSON'S VIEW



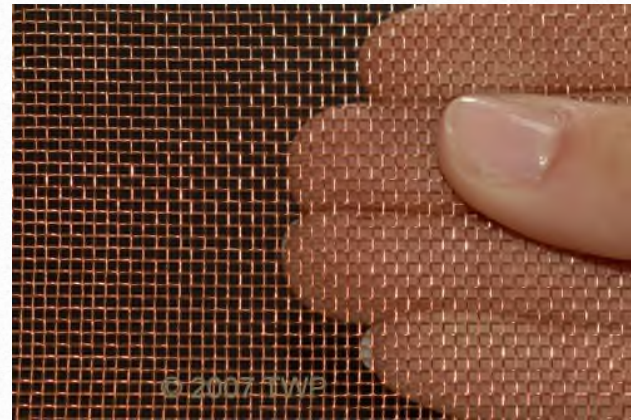
A COCKROACH'S VIEW



2. EXCLUSION

Examples:

- Install door sweeps.
- Seal cracks and crevices with silicone caulk.
- Pack larger crevices with copper or stainless steel mesh.



3. EDUCATE RESIDENTS

- Residents can make or break an IPM effort
- Facilities staff and pest management professionals are important for multifamily buildings



4. SANITATION

Photo: City of Houston Bureau of Children's and Environmental Health



03/18/2008

- Food
- Water
- Harborage



A NOTE ON WATER

- Essential for insects & rats, but not for mice or bedbugs
- Mosquitoes
- Structural damage

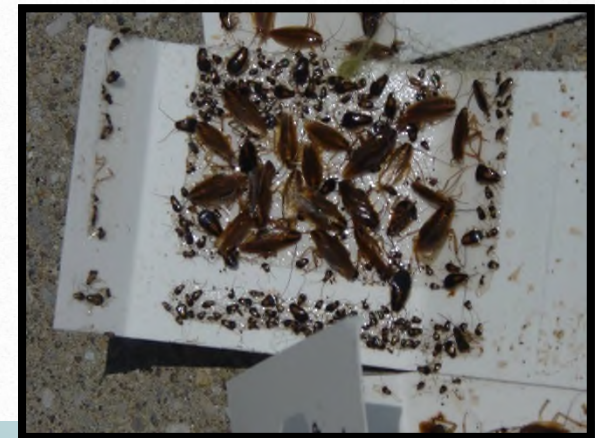
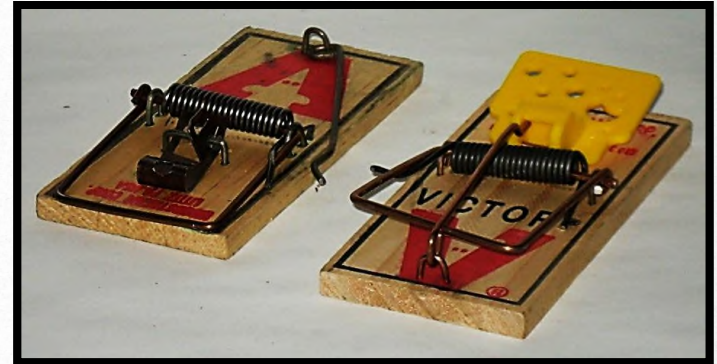


Photo: City of Houston Bureau of Children's and Environmental Health



5. PHYSICAL CONTROL

- Traps
- Baits and gels
- Inert dusts
- Insect growth regulators



BE AWARE OF ILLEGAL AND RISKY PESTICIDES

- Pesticides that look like candy - mothballs
- “Miraculous” Chinese Insecticide chalk
- “Tres Pasitos”
- Many pesticide have been withdrawn



↑
candy!



EPA SIGNAL WORDS FOR POISONS



CAUTION

CAUTION means the pesticide product is slightly toxic if eaten, absorbed through the skin, inhaled, or it causes slight eye or skin irritation.

WARNING

WARNING indicates the pesticide product is moderately toxic if eaten, absorbed through the skin, inhaled, or it causes moderate eye or skin irritation.

DANGER

DANGER means that the pesticide product is highly toxic by at least one route of exposure. It may be corrosive, causing irreversible damage to the skin or eyes. Alternatively, it may be highly toxic if eaten, absorbed through the skin, or inhaled.

POISON

If this is the case, then the word “**POISON**” must also be included in red letters on the front panel of the product label.



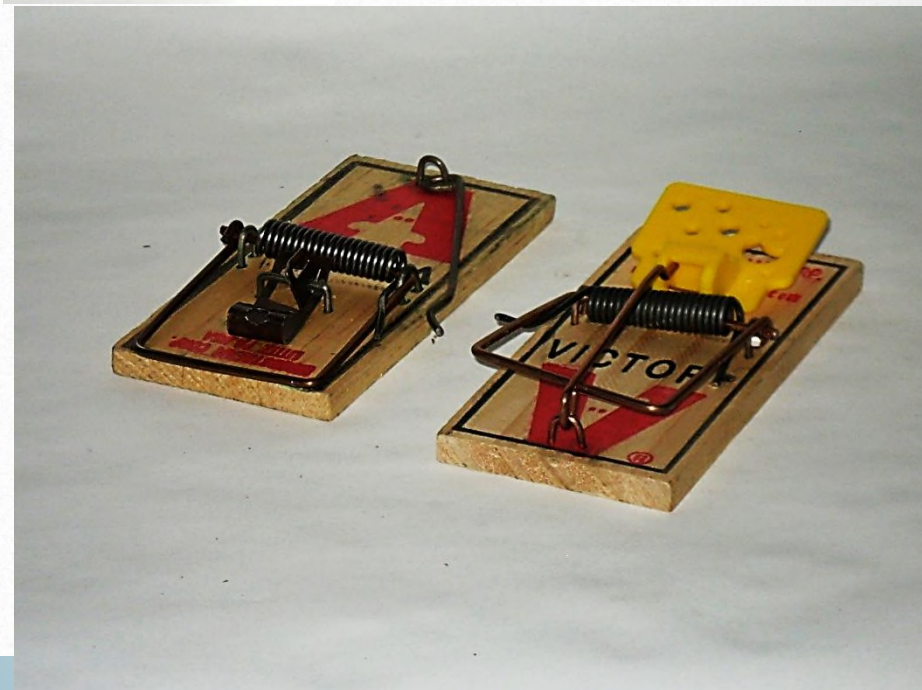
6. MONITORING FOR COCKROACHES

- Keep looking to spot reinfestations
- Place glue traps in corners
 - ◆ Behind appliances
 - ◆ Under sink
 - ◆ Under cover!
- Date and mark
- Don't disturb



6. MONITORING FOR RODENTS

- Use snap traps
- Place in corners, along runways and in tight dark spaces
- Check daily
- Increase trapping if monitors indicate activity
- Always have monitors for insects and rodents in place



THE PANIC OF BED BUGS

- Can be avoided and eliminated
- Every skin irritation or bite is not bed bugs
- You can see them.
- Do not cause or spread diseases.



BED BUG - TREATMENT

- Inspection
- Vacuum
- Heat or cold
- Pesticides by PCO only
- Re-inspection and retreatment
- Encasements and interceptors



REVIEW . . . WHAT DO YOU REMEMBER?

1.

2.

3.



REVIEW . . . WHAT DO YOU REMEMBER?

4.

5.

6.



REVIEW . . . WHAT DO YOU REMEMBER?

7.

8.

9.



REVIEW . . . WHAT DO YOU REMEMBER?

10.

11.

12.



REVIEW . . . WHAT DO YOU REMEMBER?

10.

11.

12.

